



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

## THE CIRCUIT FLOW OF MONEY

The daily expenditures by consumers for new consumers' goods, upon which business stability largely depends, are determined in part by the total volume of money in circulation, in part by other factors including the frequency with which that money is returned to consumers. The flow of money, therefore, from use in consumption to another use in consumption should not be overlooked in studies of the causes and conditions of business fluctuations. It is the purpose of this paper to describe certain aspects of this circuit flow of money, to raise the question whether it does not deserve more attention than it has yet received in our analyses of business cycles, and to suggest pertinent lines of investigation. Unfortunately, the statistics upon which the most important conclusions concerning this subject must be based are not at hand and are not likely to be for a long time to come. The following discussion will have served its purpose if it stimulates further inquiry in profitable directions and helps to hasten the day when the necessary statistics are available.

There are streams of goods and streams of money which, in a literal sense, are constantly, though not steadily, moving in opposite directions. By "money" we mean throughout this discussion all forms of currency and also bank deposits subject to check; by "goods" we mean new commodities. For the most part, raw materials are grown, extracted and graded, moved on to factories and prepared for final consumers, moved on to wholesalers, thence distributed to retailers and finally turned over to consumers. At the same time, streams of money are moving in the opposite direction—a main stream becoming smaller and smaller as it flows from consumers to retailers, from retailers to wholesalers, from wholesalers to manufacturers, from manufacturers to producers of raw materials, and thence, mainly in the form of payments for personal services, back once more to consumers. From various places in this main stream, smaller streams take part of the money directly or indirectly back to consumers. This circuit movement is one great difference between the flow of money and the flow of goods. When goods get into the hands of the consumers, they are usually disposed of, and thus they are withdrawn forever from the stream. On the contrary, most of the money that reaches the consumer is paid by him to retailers and to others; and thence it proceeds around the circuit.

The stream of money from use in consumption of new goods back to use in consumption of new goods, we shall call the circuit flow of money. The average time taken by money in making this round through the various streams, we shall call the circuit time of money. Its rate of

flow we shall call the circuit velocity of money. The circuit velocity is the reciprocal of the circuit time. If, for example, the circuit velocity is two times a year, the circuit time is one half year.

We are not now speaking of what economists call the velocity of money. By that term, they mean the frequency with which money is used for any purpose whatever, that is, its turnover within a given period of time. Obviously, without due consideration of the velocity of money, no discussion of monetary problems is complete; for one dollar spent ten times, if spent on the same day and for the same purpose, has about the same effect as ten dollars spent once. In any given period of time, the amount of money actually spent is the product of the quantity of money and its velocity. But before we can determine exactly how the movements of money affect business, we must consider certain phases of the circulation of money—particularly, the circuit velocity of money—that may be as significant as the velocity of money as a whole. If the volume of new consumers' goods moving into consumers' hands maintained a definite ratio to the total volume of goods in circulation, the circuit velocity of money would tend to bear a definite ratio to the velocity of money as a whole. In that case we should have no special interest in the circuit velocity of money. But our entire discussion is based on the assumption that these definite ratios are not maintained for any considerable time. We assume, on the contrary, that all periods of major business disturbances are characterized by an upsetting of the ratios that hold in times of relative business stability.

The equation of exchange which takes into account only the velocity of money in general takes no account of some of the specific causes of business fluctuations. For some purposes, the general equation  $MV = \sum pQ$  is not as useful as the equation  $MC = \sum pq$ , in which  $C$  is the circuit velocity of money and  $q$  is the volume of new consumers' goods sold to consumers. We should consider separately changes in the velocity of money spent for consumers' goods and changes in the velocity of money used in other ways. Money is not spent more frequently in retail markets merely because it is spent more frequently in other markets. Money may work faster in order to pass woolen goods through more hands on their way to clothiers' shops, without passing more garments through the shops. In other words, additional middlemen may make use of money without making additional sales to consumers. Both velocity and quantity of money might remain constant—that is to say, people might have the same amount of money and spend it as rapidly as ever—and yet the markets might sense trouble. For if people decreased the amount spent for new goods within a given period of time, and to the same extent increased the amount spent in other ways, they would thus decrease the circuit

velocity of money; and they might thereby temporarily depress business, without decreasing the velocity of money. Under certain conditions, therefore, the turnover of money as a whole may have less to do with business fluctuations than the turnover of money in its particular function of moving goods into the hands of consumers.

It is manifestly impossible to predict the course which a given coin will take from use in consumption back to another use in consumption. Even if we knew exactly what course it had just taken, we could not know what course it might next take. And it would be exceedingly difficult to find out. To follow accurately a single circuit of even a small part of our currency—our silver dollars, for instance—would require much of the time of the entire population and thus interfere with their circulation. We can, however, study the factors that tend to change the circuit velocity of money as a whole.

Money is in circulation, in our use of the term, as long as it is in the possession of somebody. The unused lending power of banks is not money in circulation, for it is not available for expenditure. It becomes money only through the joint act of a bank and a borrower. The lending power of banks is like gold in the mines; it is not money until somebody puts it where it can be used as money. All bank deposits subject to check are money in circulation, no matter what proportion of these deposits are checked out in any given month, just as all pocket money is in circulation regardless of the amount that is spent on any given day. Within how long a period of time a volume of money equal to the total volume in circulation will be spent by consumers depends upon the circuit time of money. In other words, whether the money spent in consumption is more or less than the total volume of money in existence depends on the length of the period we are considering. In a certain sense, it is true, all money is idle except when it is actually being used in exchange; but in that sense only one dollar out of many thousands is active, and all the rest are idle, in any given minute. It is only a matter of convenience which definition we employ. Either, if used consistently, leads us to the same conclusions as the other.

### *Diagram of the Flow of Money*

The diagram on the opposite page, similar in plan and purpose to one devised by Mr. M. C. Rorty, represents, in a general way, the circuit flow of money. To find fault with this diagram from an engineering standpoint would not be difficult; neither would it be sensible. All we should ask of these reservoirs and pipes is that they serve the purpose at hand. In the main, subject to certain qualifications to be made presently, this diagram does serve our purpose. It pictures the flow of money when business is relatively stable.

[illegible]

**POLLAK FOUNDATION**

The double reservoir at the top shows the amount of money in the hands of individuals and available for expenditure in consumption. This is what we have previously called the consumers' fund. The reservoir is divided into two parts in order graphically to represent the fact that a large part of the money received by individuals is income, most of which is spent in consumption; while a smaller part is money received from the sale of real estate, bonds and stocks, most of which is re-invested. The two parts of the reservoir, however, are connected with pipes, in order to take account of the fact that some income is invested and some money received from the sale of securities is spent in consumption. These connecting pipes are important. We must bear in mind that they are always partly, and never wholly, clogged. By their aid, we may visualize the fact that we have no means of knowing how much of the consumers' fund actually will be spent in consumption in any given period of time.

Into the right-hand section of the consumers' fund, three large pipes are emptying: one represents the large proportion of individual incomes, about 70 per cent, which is derived from personal services; the others represent the smaller proportion, about 30 per cent, derived from management and property, including rentals, royalties, interest and dividends. These percentages are the averages, in round numbers, of the figures for 1909-1918, found in the admirable study of *Income in the United States*, published in 1921 by the National Bureau of Economic Research. The sizes of some of the pipes in the diagram, however, are based, necessarily, on much rougher estimates. No dependable study has yet been made of the proportions of individual incomes which are spent for new goods, services, real estate and investments.

Leading out of the reservoir of consumers' incomes are various pipes which represent expenditures for rent, taxes, clothes, food, sundries and wages. The relative, estimated amounts spent for these various purposes are indicated approximately by the size of the pipes. It will be observed that most of the individual incomes are paid at once to those who are engaged in the distribution of finished commodities. These distributors, in turn, pay much of the money they receive directly to manufacturers, who, in turn, pay much of the money they receive directly to producers of raw materials. All along the way some of the money, mainly in the form of wages, profits and interest, gets into the hands of individual consumers and is spent for consumers' goods, thus completing the circuit flow.

Some of the money completes the circuit quickly, some of it, slowly. As shown in the diagram, a part of the consumers' income is spent directly for personal services and a part is paid to individuals for

second-hand automobiles and other "old goods," and is thus passed directly from one consumer to another. Most of the money spent by consumers, however, takes a longer course before it finds its way back to the consumers' fund. Part of the money that is spent for "new goods"—a pair of shoes, for example—goes to the wholesaler; part of that money goes to the manufacturer; part of that money goes to the tanner; part of that money goes to the farmer who raised the stock; part of that money goes to the producer of harvesting machinery; part of that money goes to mechanics in the factory, and is thus returned to the consumers' fund. During the circuit from consumer back to consumer, some of the money spent for the pair of shoes passed through more hands than in our illustration; some of it passed through fewer hands. The part that the retail shoe dealer paid immediately in weekly wages to his clerks made the circuit quickly. The part that was set aside in cash as undivided profits of the shoe manufacturer may have taken a long time to make the circuit. It is the average time taken by all the money in the flow from one use in consumption to another use in consumption that we have called the circuit time of money.

#### *The Flow of Money and the Flow of Goods*

Upon the rate of flow of money into the reservoir of personal incomes depends the even flow of goods from producer to consumer. The stream of money is, in fact, a line of communication. Money has often been compared with roads. Adam Smith even went so far as to anticipate this age of aeroplanes: he called money "a sort of wagon way through the air." He emphasized the fact that money is unlike factories and stores. Rather, it is like railroads and telephones; for its function is not to produce or to exchange goods, but to facilitate their production and exchange. It is only a means to an end.

Nevertheless, anything that happens to any of our lines of communication so as to disturb the even flow of goods can retard the production and distribution of goods. Our railroad lines are obviously of crucial importance. At times some of our freight cars get side-tracked and lie idle; some get diverted from more essential to less essential uses. Now and then a bridge falls down and traffic is held up. Sometimes transportation facilities fail to meet increasing needs, as they did throughout the United States during the car shortage of 1920. Whatever thus prevents the orderly movement of goods tends to prevent the further production of goods.

Similarly, whatever interferes with the monetary lines of communication—that is to say, whatever retards the even flow of money from consumers back to consumers—tends to retard the flow of goods and thus to disturb business as a whole. Some money gets side-tracked in

hoards, in cash balances, even in banks, and is unemployed for an unusually long time; some money gets diverted at times from more essential to less essential uses. Now and then a bank fails, and there is a sudden stoppage of the trade movements that were dependent upon the tied-up funds of the bank. Sometimes the consumers' fund is increased out of proportion to increased production, as in most countries in the years following the World War. At other times, not enough money flows into the consumers' fund to maintain the production-consumption equation: the volume of finished goods increases more rapidly than the volume of consumers' expenditures. In short, whatever happens to the medium of exchange at once affects the whole industrial world in some way; whatever prevents the circulating purchasing power from moving goods to final consumers interferes with the further production of goods.

### *Variations in the Rate of Flow*

What it means to business to have variations in the rate of flow of money into the consumers' fund may be seen if we continue to think of this fund as water in a vast reservoir. The simile need not mislead us if we have in mind that it proves nothing, and if we take care not to work it too hard even for purposes of illustration. Let us observe, then, that some of the water in the reservoir moves through conductors to the turbines of electrical plants, whence power is transmitted to distant cities where it moves street cars, lifts elevators, runs washing-machines, cures diseases, illuminates buildings and in a thousand other ways sustains the activities of our complicated modern life. Some of the water moves through irrigating ditches to innumerable farms where it turns barren wastes into fields of wheat. Some of the water runs through mills where it moves machines that make the wheat into flour. Some of the water moves in river beds where it has its part in carrying the wheat and the flour from those who have a surplus to those who have none. Thus, at all times, a large part of this current supply of water is doing economic work.

A part of this water supply, on the other hand, has no share in the production and distribution of goods—does no economic work whatever. At times, some of it stays on the surface of the reservoir in the form of ice; it is seasonally unemployed. Some of the water, after turning the wheels of industry at one place, moves on down the river until it breaks through the bank and comes to a stop in a dead basin. Thus it is withdrawn from the channels of commerce; it can do no more economic work until somehow it is released and again set in motion. There is another portion of the supply in the reservoir that is completely lost to industry; it evaporates before it has been used in any way. And there is still another portion that evaporates along



the routes of commerce, after it has played a part in the world's work. Whatever thus disappears by evaporation is subtracted from the current supply of power; the loss is made good only when the power is re-created, as it is when the rain falls and the water flows again into the reservoir.

Stability in production, as far as it depends on this water supply, is concerned only with *the rate of flow*. Nothing that happens to the water supply can upset production schedules provided the net result is an even flow of power, day in and day out, in the same channels, performing an unvarying amount of work. How much or how little of the water supply evaporates, or leaks from the pipes, or remains frozen in the reservoir, or is held back in dead basins, is of no consequence, provided the total volume thus withheld from industry and its distribution remain the same. Only changes count. Until there are changes in the rate of flow, the work done will be plotted on the graphic chart as a straight line.

Similarly business stability, as far as it depends on money, is concerned primarily with the rate of flow of money into the consumers' fund. As far as stability is concerned, it does not necessarily make any difference how much money is in government vaults, or is frozen in loans, or is idle in hoards, or is carried in pockets and tills as daily cash balances, provided the volume of money thus withheld and the volume of goods coming upon the markets remain the same from day to day. Only changes count. When money that has been idle is put to work, or money that has been at work retires temporarily from business, it changes the rate of flow of money from consumption back into consumption: that is to say, it changes the circuit velocity of money. At any stage of the business cycle, a change in the circuit velocity of money tends to cause a change in the state of business.

Whether the change is good or bad for business depends on the state of business at the time. This appears to be overlooked in much that is said about "economizing credit," "making money more efficient," and "bringing hoards out of hiding." The usual assumption seems to be that anything that increases the velocity of money in general, or the amount spent by consumers, is advantageous to business in general. It may be good or bad for business. It all depends on economic conditions at the time and the nature of the transactions which are affected by the increased "efficiency" of money.

### *The Circuit Time of Money*

How long does it take, on the average, for each dollar to make this round from one use in consumption to another use in consumption? What are the factors which retard or accelerate the flow? What are the effects of these fluctuations on the state of business activity? What

are the correlations between changes in the velocity of money and changes in the circuit velocity of money? We shall now venture to open up the discussion of these questions in a preliminary way, though it may be many years before research will answer these questions as definitely as they must be answered before anyone can account in full for the ups and downs of business.

What is the circuit time of money? The available statistics are not a sufficient basis for an answer to this question. If we use Professor Fisher's estimate of the volume and velocity of money in the United States, in the year 1909, and if we then, from the estimate of the National Bureau of Economic Research for the income of that year, guess at the value of new goods bought by consumers, we arrive at an estimate of the circuit time of money. If the total money transactions for that year were \$400,000,000,000, and the total amount of money in circulation was \$8,680,000,000, the average velocity of money was approximately 46. If consumers spent \$20,000,000,000 for new goods during that year, the circuit time of money was 8,680,000,000 divided by 20,000,000,000, which gives .434 years, or 158.4 days. On the basis of these figures, the circuit velocity of money, the reciprocal of the circuit time of money, would be approximately 2.3. This would mean that for every dollar spent by a consumer for new consumers' goods during 1909, approximately nineteen dollars were used for other transactions. That is to say, although each dollar was used about once in every eight days for some purpose or other, it was used only once in 158 days for the purpose of passing new goods into the hands of consumers. Looking back at our diagram, we may visualize these statistics of exchange by thinking of the dollars that leave the consumers' fund at the top through the new goods pipes as being used, on the average, nineteen times elsewhere in the circuit (including parts of the flow of money that are not shown) before they are again used in consumption. But there is so much guessing in these figures that they are useful only for purposes of illustration. If the turnover of bank deposits subject to check is now about twenty-five times a year, as estimated by the statistical division of the Federal Reserve Bank of New York, the figures for velocity in our illustration are probably far from right. Our research agencies, no doubt, will provide us some day with more dependable estimates than any now available for the velocity of money and the annual expenditures of consumers for new consumers' goods.

### *Defects in the Diagram*

Evidently, in order to represent all the uses of money in the course of its journey from consumer back to consumer, we should need a much more complicated diagram. It would, in fact, be so complicated that,

without a vast amount of study, it would be confusing rather than clarifying. For that reason, we have not shown many of the money movements of minor importance.

Nor have we shown all the movements that are of major importance. The reader has already observed, no doubt, that the diagram overlooks the fact that nearly all money, on its way from consumer to consumer, passes through banks. Up to this point, we have directed attention to the place in the circuit flow of money where it is spent by consumers. We have made this the center of our interest because consumption is the end for which goods are created; and because we wish to raise the question whether anything that happens to money in any other part of the circuit can cause a major disturbance in business, as long as just enough money continues to be spent in consumption to take away the goods without a change in the price level. There is good reason, however, for paying special attention to that part of the circuit in which money flows through the banks; for it is literally true that most of the money that is spent in consumption begins and ends its career in a bank. When a farmer who is waiting for his wheat to mature applies to the bank for a loan of ten thousand dollars, the bank increases its deposits to that extent, minus the discount. The total volume of money in circulation is thereby increased. As soon as the farmer spends the money, it proceeds on its way around the circuit. In due time, if all goes well, the farmer sells his wheat and pays the loan at the bank, thereby reducing the amount of money in circulation by ten thousand dollars. Thus, in a certain sense, most of our money is created and extinguished in the banks.

It is sometimes said that the money is not extinguished by the payment of a loan since the bank is at liberty, the moment the loan is paid, to lend precisely the same amount to another borrower. The fact that the bank passes on the purchasing power by means of different pieces of paper is said to make no difference. When a bank loan is paid, however, the amount of the loan is actually withdrawn from the circuit flow of money; and an equal amount is returned to the stream only by a new joint act of the bank and a borrower. Unless we think of bank deposits as being thus created, and extinguished, and re-created, we leave out of account one of the chief causes of fluctuations in consumers' incomes. If all the money that flowed into the banks flowed out again at a constant rate, the banks could be omitted from the diagram, because they would neither retard nor accelerate the flow of money into the consumers' fund. But the banks must be taken into account because they, in conjunction with their customers, cause changes in both the quantity of money in circulation and in the circuit time of money. No diagram is complete, therefore, which ignores these changes.

A similar defect in our diagram is the failure to make allowance for the action of the government in changing the amount of money in circulation. Our system of reservoirs and pipes makes no provision for putting any more money into the stream or taking any money out. All the money flowing into the public treasury at the bottom of the page is represented as coming directly or indirectly from individual incomes. A complete diagram, however, would take account of the fact that governments—not infrequently, as the world has recently observed—coin money or print money or otherwise supply the deficiencies in the government reservoir, whenever money is flowing out through expense conduits faster than it is flowing in through taxation conduits.

### *Factors that Alter the Circuit Time of Money*

Our next question is, what are the factors which retard or accelerate the flow of money from consumer back to consumer? This question would not concern us if money actually flowed through the channels of commerce as steadily as in our diagram. Here we have pictured all the pipes as unobstructed, free from leaks, and unvarying in size. If the circuit flow of money were such, day in and day out, that we could accurately represent it by means of such a simple and static picture, and if the flow of goods were equally steady, industry would be perfectly stable. There would be no business cycles. But money never does flow through the arteries of trade as steadily as this. The rate of flow changes from time to time, often so slowly that the ordinary observer notices no change at all; sometimes so rapidly that nearly everybody is aware that something has happened, though few know that it has happened to money, and fewer still know exactly what it is that has happened to money. Furthermore, variations in the rate of flow come more rapidly in some parts of the circuit than in others. These facts might be suggested by means of gate-valves in all the pipes, subject to the control of individuals. Nothing but a motion picture, however, could show all these multifarious and kaleidoscopic changes. Our simple diagram can help us only in a general way to visualize the major movements. Not until we consider in what specific respects this diagram fails to depict what actually happens to money during the circuit are we likely to account for business instability.

As a means of suggesting profitable fields for research in connection with the circuit time of money, we may enumerate some of the causes that accelerate and some of the causes that retard the circuit flow. For the purposes of this enumeration, we shall assume, first, that the total money in circulation remains the same and, second, that the effect of each cause is not offset by the operation of other causes.

The circuit time of money is ordinarily decreased—that is to say, money moves around the circuit faster—under the following conditions:

(1) When there is an increase in the total amount paid as wages; since wage-earners spend a larger proportion of their money for goods than do other groups of consumers.

(2) When taxes are decreased; since ordinarily money paid in taxes comes from the consumers' fund, but finds its way back slowly.

(3) When there is a general belief that prices are about to rise; for then it appears that the quicker we spend our money, the more we get for it. Consequently, we carry smaller average cash balances, and spend a larger proportion of our money for goods.

(4) When there is general expectation of higher wages and higher profits; for at such times people spend money in consumption more quickly and more freely.

(5) When people save less than usual; since thrifty people usually have on hand some money, intended for their savings banks, which they have not yet deposited. As the total savings of the country decrease, there is a corresponding decrease in this money waiting to be invested.

(6) When there is an increase in the amount of money borrowed by consumers for use in consumption.

(7) When a larger proportion of exchanges are made by means of bank checks; since consumers who pay their bills by check are likely to make most of their payments very soon after most of their income is received, usually on the first few days of the month, and there is therefore less need for keeping money on hand. Whereas people who pay all their bills with currency usually distribute their payments over longer periods of time; and, in order to do so, they carry larger average daily cash balances in proportion to their expenditures.

(8) When pay days come more frequently. As a rule, those who sell their services or lend their money collect their pay at fixed intervals of time; and, as a rule, what they receive on one pay day they spend before the next pay day. For the most part, wages that are received weekly are spent weekly; salaries that are received monthly are spent monthly; rents and dividends that are received quarterly are spent quarterly. All this in turn affects the receipts and, therefore, the expenditures of those who sell goods. Therefore, more frequent payments of wages, salaries, or dividends mean more rapid circulation of money from use in consumption back to use in consumption.

(9) When goods pass through fewer hands on the way to the consumer; because of the elimination of some of the middlemen, for example, through the vertical integration of industry.

(10) When there is a decrease in the amount of money used to transfer real estate, stocks, bonds, etc.; since money, while in use for such purposes, is not used in consumption.

(11) When the volume of undivided profits hitherto carried in the form of money is decreased.

Under all these conditions, ordinarily, the circuit flow of money is accelerated: under the opposite conditions, it is retarded.

The influence of most of these factors on the velocity of money has been considered by various writers, notably by Professor Irving Fisher, in *The Purchasing Power of Money*. But changes in these factors do not affect velocity and circuit velocity in the same degree or even, in all cases, in the same direction. How important these differences in degree and in direction may be, as factors in the price level and the state of business activity, we cannot tell without additional research. The last three, at least, of the conditions enumerated above appear to merit much further study.<sup>1</sup>

But throughout this enumeration we have assumed that the total volume of money in circulation remains the same; whereas we are well aware of the fact that the volume does not remain exactly the same for any two days, and that, at times, the volume changes rapidly. To take this fact into account, however, we have only to change our conclusions slightly. Instead of saying, for example, that money flows faster when there is an increase in the total amount paid as wages, we must say "when there is an increase in the proportion disbursed as wages of the total volume in circulation." Similarly, we must make some of our other statements relative rather than absolute.

We cannot dismiss so easily our assumption that the effect of each cause is not offset by other causes. We are not at all sure, for instance, of the exact effect of increased taxes on undivided profits, or on wages, or on stock exchange transactions. We do know that the nature of the taxes will make a vast difference, and that we are not prepared fully to explain business fluctuations, or thoroughly to understand national monetary policies, until we have the aid of further research concerning the effects of various forms of taxation, under various conditions, on the circuit time of money. We need further research, as well, concerning fluctuations in the daily balances of individuals in pocket and in bank. Before we can determine the influence of these fluctuations at different stages of the business cycle, we must correlate them with fluctuations in wages, prices, unemployment, and volume of trade. We must also find the correlations among other factors that influence the circuit flow of money. One conclusion, however, we can safely draw without further investigation: variations in the factors enumerated above are to such a large extent independent of each other that there is virtually no chance that these variations

<sup>1</sup>This question and most of the others that are raised in this paper are further considered in *Money in the World's Work*, a volume now in press, of which "The Circuit Flow of Money" is one chapter.

would counterbalance. The circuit time of money is constantly changing.

### *Conclusions*

In order to forecast business fluctuations, or even to explain those that have already occurred, we should know more than we now know about conditions that determine fluctuations in the amount of money spent in consumption, including factors that alter the circuit time of money. How little we actually know is shown by the amazement among men generally over the way in which retail sales were sustained during the depression of 1921. Business as a whole was totally unprepared for the effective consumers' demand that continued after the slump in wholesale markets. Yet nothing magical happened. Every dollar spent by consumers came from somewhere, went somewhere, and left a record of some sort, nearly every time it was spent. These records, it is true, are not all that they should be. Measures of the flow of money through the various channels are not as comprehensive, or as accurate, or as detailed, or as readily available as we should make them. Yet even such records as we now have for 1921, if assembled, correlated, interpreted, and tested for error, by approved statistical methods, would undoubtedly go far toward explaining what appears to be a mysterious persistence of consumers' demand. Even without such records for 1921, the consumers' demand for that year might not have seemed at all mysterious, if similar records of previous business cycles, similarly interpreted, had been available and generally understood by leaders in commerce and finance. For it is probable that the various forces that determined the volume of daily sales in 1921 operated in about the same way, in varying and measurable extents, as in previous periods of depression. It is possible, furthermore, that had we known, in the years following the World War, as much as we might readily have known about the circuit flow of money in previous years, in relation to the flow of consumers' goods, there would have been neither the extreme business expansion of 1919 nor the disastrous contraction that followed. For the major causes of the expansion and the contraction were monetary and subject to human control in a far greater degree than has hitherto been deemed possible.

WILLIAM T. FOSTER.